

What is claimed is:

1. An integrated bevel cleaning (IBC) apparatus,
5 comprising:
a transfer position where a substrate is positioned
for processing and where a substrate is positioned after
processing;
a rinse position where the substrate is rinsed; and
10 an etch position where the substrate edge bead is
removed; and
an actuator for positioning the substrate in the
transfer position, the rinse position and the etch
15 position.
2. The IBC apparatus of claim 1 further comprising a
substrate centering hoop for supporting the substrate in
the transfer position.
- 20 3. The IBC apparatus of claim 2 further comprising a
substrate centering hoop rinsing nozzle.
4. The IBC of claim 1 further comprising at least one
25 rinsing nozzle located proximate said rinsing position for
rinsing at least an edge region of the substrate.
5. The IBC of claim 4 wherein said at least one rinsing
nozzle is a plurality of nozzles positioned to rinse both
30 sides of the substrate.
6. The IBC of claim 1 wherein said transfer position is
accessible by at least one slit valve.

7. The IBC apparatus of claim 1 wherein said actuator comprises a spindle assembly for retaining a substrate and rotating the substrate, and a linear actuator for raising
5 and lowering said spindle assembly.

8. The IBC apparatus of claim 7 wherein said spindle assembly comprises a vacuum chuck.

10 9. The IBC of claim 1 further comprising at least one etchant dispenser arm positioned proximate the etch position to apply etchant to the substrate.

10 10. The IBC apparatus of claim 9 wherein said etchant is
15 applied to an edge exclusion zone of said substrate.

11. The IBC apparatus of claim 9 wherein said at least one etchant dispenser arm is rotatable into a position near the substrate and away from the substrate.

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12. The IBC apparatus of claim 11 wherein said at least one etchant dispenser arm is at least three etchant dispenser arms.

25 13. The IBC apparatus of claim 12 wherein said at least three etchant dispenser arms are coupled to a single motor for simultaneously rotating the at least three dispenser arms.

30 14. A method for etching electroplated material from a substrate within an integrated bevel cleaning (IBC) apparatus, comprising:

introducing the substrate into a transfer position
within the IBC apparatus;

moving the substrate to a rinse position within the
IBC apparatus;

5 rinsing the substrate in the rinse position within the
IBC apparatus;

moving the substrate to an etch position within the
IBC apparatus; and

etching material from the substrate in the etch
10 position within the IBC apparatus.

15. The method of claim 14 wherein the substrate is
rotated while in the rinse position and the etch position.

15 16. The method of claim 14 wherein the introducing step
further comprises opening at least one of a plurality of
slit valves.

17. The method of claim 14 wherein the step of etching
20 comprises positioning at least one etchant dispenser arm
proximate the substrate.

18. The method of claim 17 wherein the at least one
etchant dispenser arm comprises three etchant dispenser
25 arms that are coupled to a single motor that imparts
rotation in all three etchant dispenser arm simultaneously.

19. A system for processing substrates comprising:
a loading station having at least one first chamber;
30 a process region having at least one second chamber;
an integrated bevel cleaning (IBC) apparatus
comprising a transfer position through which a substrate

can be passed from said load station to said process region without processing being performed in said IBC apparatus.

20. The system of claim 19 wherein said at least one
5 second chamber is an electroplating chamber.

21. The system of claim 19 wherein said load station comprises a first substrate handler and said second process region comprises a second substrate handler.

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22. The system of claim 19 wherein said IBC apparatus performs edge bead removal and substrate cleaning.